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NARCISSISM AND INTERPERSONAL RELATIONSHIPS: EXAMINING THE USE  
OF PROSOCIAL AND COERCIVE BEHAVIOR STRATEGIES AMONG  
ADOLESCENTS IN A RESIDENTIAL SETTING

by

Marion Tam'eca Wallace

Abstract of a Dissertation  
Submitted to the Graduate School  
of The University of Southern Mississippi  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Philosophy

August 2012

## ABSTRACT

# NARCISSISM AND INTERPERSONAL RELATIONSHIPS: EXAMINING THE USE OF PROSOCIAL AND COERCIVE BEHAVIOR STRATEGIES AMONG ADOLESCENTS IN A RESIDENTIAL SETTING

by Marion Tam'eca Wallace

August 2012

The association between Machiavellianism and bistrategic control has been demonstrated in children and adolescents (Hawley, 2003). Machiavellianism shares several features with narcissism. The present study investigated whether adolescents with higher levels of narcissism were perceived by peers as engaging in prosocial or antisocial behaviors depending on the phase of the relationship and whether control strategies translated to peers' ratings of likability. Forty-seven participants (43 males, 4 females) provided data for this study. Overall, individuals who reported higher levels of Machiavellianism also reported using more coercive behavior strategies. Self-reported narcissism was only associated with self-reported use of more coercive control strategies at the five-month follow-up. Furthermore, individuals who were seen as using more coercive behavior strategies were liked less, but more respected, by their peers. Therefore, although narcissism and Machiavellianism are tied to similar resource control styles, they appear to affect peer perceptions in somewhat different ways.

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A Dissertation  
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## CHAPTER I

### INTRODUCTION

Bistrategic control is the use of both prosocial (e.g., cooperative) and coercive (e.g., aggressive) methods to achieve one's social goals. Obviously, prosocial methods of control can lead to desired social outcomes (Gecas & Burke, 1995; LaFreniere & Charlesworth, 1987; Wheeler, Gorey, & Greenblatt, 1998). However, some researchers conclude that coercive methods, particularly aggression, can also be beneficial in obtaining social benefits (Hawley, Little, & Pasupathi, 2002). It is believed that the most common approach to social resource control—labeled typical—is to employ approximately equal amounts of prosocial and coercive behaviors (Hawley, Shorey, & Alderman, 2009). Some individuals, though, have been shown to use both strategies to a particularly high degree (Hawley et al., 2009). Individuals who fit this description are known as bistrategic controllers (Hawley, 2003). Thus, although typical and bistrategic controllers both use coercive and prosocial behavior, bistrategic controllers appear to use these strategies to a much higher degree (Hawley et. al., 2009). Preliminary research has shown that bistrategic control is one hallmark of individuals with high levels of Machiavellianism (Hawley, 2003).

Machiavellianism has been used to describe individuals with a manipulative, cold, interpersonal style who are also regarded as distrustful, exploitative, and self-absorbed (Christie & Geis, 1970). The relation between Machiavellianism and bistrategic control has been demonstrated in children as well as adults (Christie & Geis, 1968; Hawley, 2003). Individuals with high levels of Machiavellianism may use resource control strategies because they are motivated to obtain control or social dominance over others

(Christie & Geis, 1970). For these individuals, bistrategic control has been correlated with the most desirable outcomes (i.e., being liked by peers, well-adjusted, and socially central) (Hawley, 2003). However, another personality construct (i.e., narcissism) could be associated with the same methods of control as a means to obtain socially desirable outcomes. Narcissism is similar to Machiavellianism in that narcissism is thought to include interpersonal exploitativeness (McHoskey, 1995), dominance, arrogance, and a lack of empathy for others (Bradlee & Emmons, 1992; Gurtman, 1992), as well as a strong desire to achieve and maintain a superior social status. Additionally, both Machiavellianism (Hawley, 2003) and narcissism (Barry, Grafeman, Adler, & Pickard, 2007) have been correlated with aggressive behavior.

Research has demonstrated a relation between narcissism and aggression in adults (e.g., Bushman & Baumeister, 1998; Stucke, 2003), as well as in youth (Barry, Grafeman et al., 2007; Thomaes, Bushman, Stegge, & Olthof, 2008; Washburn, McMahon, King, Reinecke, & Silver, 2004). However, there is a lack of research examining the extent to which individuals with high levels of narcissism also use prosocial methods of control. Individuals with high levels of narcissism tend to initially be liked by others (Morf & Rhodewalt, 2001), suggesting that they may use prosocial tactics to gain acceptance in social situations, but they may later use aggressive or other antisocial means to maintain their desired social status (Raskin, Novacek, & Hogan, 1991). Therefore, like Machiavellianism, narcissism may be associated with bistrategic control in social relationships, although the relative use of these strategies may depend on the phase of the relationship. The proposed study sought to explore this issue.

Much of the existing empirical evidence on Machiavellianism and narcissism is based on adults. In light of the emerging evidence on these constructs in youth, it may be particularly useful to study their role in different methods of resource control during adolescence. Longstanding theory points to adolescence as a time when peer relationships become a particular priority. For example, researchers have theorized that during early adolescence, the individual's priorities shift, and he or she becomes preoccupied with dominance and popularity within his or her peer group (LaFontana & Cillessen, 2010; Merten, 2004; Sullivan, 1953). Indeed, Heilbron and Prinstein (2010) found that low peer status was associated with suicidal ideation, even after controlling for depression. Another study found that eighth and ninth graders were more likely to be influenced and persuaded by peers than were younger children (Steinberg & Silverberg, 1986). Additionally, during adolescence, peers have an increased effect on adolescent behavior, such as the decision to use drugs (Duan, Chou, Andreeva, & Pentz, 2009) and alcohol (Coleman & Carter, 2005). One way in which adolescents may influence others or establish their positions within social groups is through resource control strategies. It is likely that adolescents use resource control strategies to gain access to desired materials/outcomes, because children as young as 10 years old appear to utilize these strategies as well (Palmen, Vermande, Deković, & Van Aken, 2011). Adolescents with higher levels of narcissism might be especially likely to engage in tactics designed to seek control over social resources because they are particularly attuned to their social status (Morf & Rhodewalt, 2001).

One perspective on why individuals may try to use both prosocial and coercive strategies in interpersonal relationships comes from evolutionary theory. Specifically, an

evolutionary perspective suggests that to gain access to needed environmental resources, one must connect with a group and then learn to thrive within that same group.

Traditionally, aggression among children and adolescents has been seen as maladaptive and has been associated with several negative outcomes, such as lower grades in school, higher drug use, and peer rejection (e.g., Brook & Newcomb, 1995; Werner & Crick, 1999). However, some researchers believe that coercive strategies, including aggression, can be beneficial under certain circumstances (Hawley, 2003). Prosocial and antisocial behavior are typically viewed as a dichotomy (Palmen et al., 2011), but conceptualizing behavior as either prosocial or antisocial based on its outcomes or on conventional standards calls into question findings of antisocial behavior (i.e., aggression) leading to positive social outcomes (e.g., popularity) (Rodkin, Farmer, Pearl, & Van Aker, 2000) and positive social impact (Zimmer-Gembeck, Hunter, & Pronk, 2007). Thus, it appears that aggression may be beneficial to some extent. It is likely that individuals who value their social status would be more likely to engage in aggressive behavior to obtain their social goals, compared to those individuals who do not have such social concerns.

Although it is clear that individuals with high levels of narcissism use aggression as a tactic to maintain their social status, it is unclear if it is the only or primary strategy used. For example, there is no literature on the strategies that narcissistic individuals use to begin their social relationships or what strategies they use to maintain these relationships. The present study examined whether individuals with high levels of narcissism are viewed by peers as using more prosocial or cooperative behavior in the early stages of relationships. Additionally, this study sought to investigate whether narcissism is associated with peer reports of coercive behaviors later in relationships. As

noted above, such bistrategic strategies have been thought to apply to Machiavellianism; however, the applicability of bistrategic control to narcissism, including among adolescents, has not yet been firmly established.

### The Dark Triad of Personality

Connections between narcissism and Machiavellianism have been discussed previously. The Dark Triad of personality was initially described by Paulhus and Williams in 2002. The triad consists of Machiavellianism, subclinical narcissism, and subclinical psychopathy (i.e., high impulsivity and thrill-seeking; low empathy and anxiety) (Hare, 1985; Neumann & Hare, 2008). Paulhus and Williams noted that meaningful levels of these personality constructs can be observed in the general population. These three personality styles share a number of common features, including an exploitative, uncaring interpersonal style, deceit, aggressiveness, and various self-promoting behaviors.

Although the Dark Triad is a fairly new concept in terms of subclinical personality, the overlap between its constructs has received some attention. Specifically, links have been demonstrated between psychopathy and narcissism (e.g., Gustafson & Ritzer, 1995; Miller, Gaughan, & Pryor, 2008), psychopathy and Machiavellianism (Fehr, Samsom, & Paulhus, 1992; McHoskey, Worzel, & Szyarto, 1998), and more importantly for this study, Machiavellianism and narcissism (e.g., Jonason & Webster, 2010; McHoskey, 1995). Despite the conceptual similarities between the constructs, results from the Paulhus and Williams (2002) study revealed only moderate correlations (i.e., .25 to .50) between them. Narcissism and Machiavellianism differed in an interesting way. In particular, narcissism was associated with displays of self-enhancement, whereas

Machiavellianism was not associated with self-enhancement tendencies (Paulhus & Williams, 2002). It appears that although both constructs are connected to similar interpersonal strategies, Machiavellianism may be tied to a more realistic self-appraisal or presentation. In other words, Machiavellianism may not include the grandiosity that is a core feature of narcissism, or grandiosity may not be as evident for individuals with high levels of Machiavellianism. Indeed, some authors believe that individuals with high levels of Machiavellianism may actually prefer covert ways of obtaining social power (Kerig & Sink, 2011). These authors suggest that boastful leaders are more likely to call attention to themselves and that by being discrete, individuals with high levels of Machiavellianism are able to avoid direct competition. Despite the grandiosity distinction, narcissism and Machiavellianism share several distinguishing features; therefore, the interpersonal strategies associated with one construct may be useful for understanding the other. More specifically, as noted above, the present study sought to explore whether the bistrategic control strategies tied to Machiavellianism apply in some way to narcissism.

### Machiavellianism

The theoretical framework for present-day conceptualizations of Machiavellianism stems from the books *The Prince* and *The Discourses* written by Niccolo Machiavelli. *The Prince* (Machiavelli, 1513/1966) describes strategies for gaining the respect of others and maintaining power or authority over a group of people. Machiavelli (1513/1966) believed that influential leaders had to possess certain personality characteristics that made them powerful in social situations. These characteristics include a willingness to use strategies such as deceit and manipulation to

obtain one's goals, a distrust of others, and a lack of conformity to traditional ethical standards. On the other hand, although *The Discourses* (Machiavelli, 1513/1950) still discussed ways of acquiring and preserving power, it also noted several non-manipulative strategies of successful leadership. Specifically, Machiavelli wrote about balancing power and the diffusion of authority so that no one person held ultimate decision making capabilities. Machiavelli stated that a ruler (e.g., prince) should have to answer to his people (i.e., the nobility) and all of the other people he governed. In addition, the people and nobility had to answer to the prince as well. This early writing gave rise to the idea of successful leadership hinging, at least partly, on prosocial or cooperative behavior in addition to manipulative or dominant behavior.

It has been suggested that Machiavellians tend to focus on extrinsic goals (e.g., money, power, status) (McHoskey, 1999). For example, in one study, Machiavellianism was associated with a tendency to withhold information from others even when there was potential for everyone to gain (Liu, 2008). Specifically, college students with higher levels of Machiavellianism were less likely to share knowledge with other members within a hypothetical company, acting in a competitive rather than cooperative manner. This withholding of information presumably produced heavier burdens on other members of the company's team (Liu, 2008). Moreover, individuals with higher levels of Machiavellianism are more likely to deceive others (e.g., lying, cheating) if doing so is believed to lead to personal gain (Sakalaki, Richardson, & Thépaut, 2007). In one study, children with high Machiavellianism scores had high affective perspective taking but low empathy (Barnett & Thompson, 1985). In other words, these children had an ability to identify the feelings and emotions of others but were unwilling or unable to actually



empathize with their affective distress. Thus, it appears that individuals with higher levels of Machiavellianism are concerned with power and authority in social situations and are not particularly troubled by using others to achieve their goals or by the impact of their strategies on others.

Although Machiavellianism has been associated with a host of negative outcomes, evolutionary theory suggests that the manipulative and exploitative interpersonal style associated with Machiavellianism may serve an adaptive function (Hawley & Little, 1999). For example, Machiavellianism is associated with being perceived as attractive and intelligent (Cherulnik, Way, Ames, & Hutto, 1981). Additionally, individuals with higher levels of Machiavellianism have been relatively successful in competitive experimental paradigms (Christie & Geis, 1970). Thus, the coercive and sometimes aggressive behavior demonstrated by individuals with high levels of Machiavellianism may be beneficial at times. However, from an evolutionary perspective, these benefits cannot be enjoyed until one first gains access to a group and its resources. Once the individual belongs to the group, he or she must still compete within that group to obtain the most desirable resources. One way of competing is behaving aggressively toward other group members (Hawley, 2003).

As noted above, the term bistrategic controllers has been used to describe Machiavellians (Hawley, 2003) based on their tendency to take advantage of the benefits of both prosocial and coercive behaviors. Bistrategic controllers tend to have better social concepts and are fairly well liked by peers, relative to typical or coercive controllers (Hawley, 2003). Moreover, Palmen et al. (2011) noted that although Machiavellians were less liked than prosocial children, they received better social relation ratings than

coercive and control (i.e., typical) children. It also appears that coercive behavior may not be as detrimental as once believed if it is accompanied by some prosocial behaviors. In fact, coercive behavioral control strategies may be more beneficial for social goals than failing to use resource control strategies at all (i.e., no prosocial or coercive control) (Hawley, Little, & Pasupathi, 2002; Little, Hawley, Henrich, & Marsland, 2002). Lastly, there is evidence to suggest that people scoring highly on measures of Machiavellianism are more likable and persuasive than their low-scoring counterparts (Fehr, Samson, & Paulhus, 1992). Similar descriptions have also been attributed to narcissism (Oltmanns, Friedman, Fiedler, & Turkheimer, 2004; Paulhus, 1998); thus, the work to date on Machiavellianism provides a useful foundation for understanding some of the behavioral tactics associated with narcissism.

### Narcissism

Narcissism is characterized by individuals who present grandiose views of themselves and want other people to see them as superior as well (Baumeister, Bushman, & Campbell, 2000). As noted above, such individuals tend to be interpersonally exploitative and seek power, and it is believed that individuals with high levels of narcissism pay particular attention to their social status and struggle to maintain it (Morf & Rhodewalt, 2001). Bogart, Benotsch, and Pavlovic (2004) suggest that social comparison is particularly important to people who are higher on narcissistic traits and that they use social situations for self-enhancement purposes because although they have high self-esteem, it is believed to be fragile and in need of constant validation. For example, narcissism is associated with a tendency to display positive affect after comparing oneself to individuals perceived as substandard but to become hostile after

upward social comparisons (Bogart et al., 2004). Individuals with higher levels of narcissism are also likely to feel entitled or superior, so social situations that support their personal views serve a protective or enhancing function. However, if the individual feels that his or her superiority is threatened, he or she is more likely to behave in a hostile manner (Bogart et al., 2004). Therefore, it appears that individuals with high levels of narcissism may attempt to bolster their self-esteem or emotional state through attempts to increase their social status and that they may resort to more antisocial or at least less socially accepted strategies if social comparisons are unfavorable (e.g., Barry, Chaplin, & Grafeman, 2006; Bogart et al., 2004; Bushman & Baumeister, 1998; Rhodewalt & Morf, 1998).

According to Morf and Rhodewalt (2001), narcissism is associated with an inflated sense of self representing an ideal that individuals cannot actually attain. They must, then, rely on outside sources of appraisal to validate their importance because they may feel that internal approval is not sufficient. However, ironically, narcissism usually damages the relationships that can provide outside validation. For example, Morf and Rhodewalt (2001) assert that narcissism is associated with insensitivity and unresponsiveness to the needs of others, so others eventually detach from the narcissist, forcing him or her to seek validation elsewhere. Nevertheless, individuals with narcissistic characteristics tend to engage in the same behavioral patterns in subsequent interpersonal relationships making it difficult to obtain the positive feedback they seek (Morf & Rhodewalt, 2001).

In addition, the repeated unsuccessful behavioral patterns exhibited by narcissistic individuals may be intermittently reinforced in such a way that maintains their behavior.

Miller et al. (2009) suggest that individuals with higher levels of narcissism are motivated by “approach” toward positive outcomes as opposed to avoidance of negative outcomes. Specifically, the potential benefits of approaching or engaging in a behavior, even if the reward is not consistently present, are believed to outweigh the possible negative consequences (Miller et al., 2009). Thus, the aggression that is associated with narcissism may be sustained due to intermittent positive social outcomes. In other words, the occasional reinforcement (i.e., admiration, acquiescence by others) that stems from engaging in coercive methods of control may be more important than the negative outcomes that are associated with it. However, behaving aggressively during initial interactions is likely to prove unbeneficial, as the sole use of aggression is usually linked to maladaptive consequences (e.g., peer rejection; Coie & Dodge, 1998). Given that higher levels of narcissism are usually associated with positive initial interactions, it may be that individuals with narcissistic tendencies use bistrategic methods of control as well.

Campbell and Campbell (2009) devised a conceptual model to explain the interpersonal relationships associated with narcissism. According to this model, relationships are composed of emerging and enduring zones. In the emerging zone, individuals are just beginning to become acquainted with one another. The enduring zone involves long-term interactions and extended social contact with others. According to Campbell and Campbell (2009), narcissists experience high levels of reward in the emerging zone when others perceive them in a favorable light. However, narcissism is associated with negative social consequences in the enduring zone once the initial attraction fades (Campbell & Campbell, 2009). There is some support for this model, with studies showing that during initial or short-term interactions, narcissists are seen as

likable, but as relationships evolve (e.g., seven weeks or more), individuals tend to view the narcissist negatively (Campbell, 2005; Paulhus, 1998). Therefore, someone with narcissistic tendencies seeks to stay in the emerging zone, which leads to changing friends, jobs, and hobbies (Campbell & Campbell, 2009).

Similarly, Campbell and Campbell (2009) suggest that the same pattern of benefits exists for the individuals with whom the narcissist interacts in that the greatest social rewards are found when both the narcissist and the other person are in the emerging zone. For example, in the emerging zone, the narcissist experiences positive self-views (e.g., Campbell, Rudich, & Sedikides, 2002), positive affect (e.g., Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004), likability in initial meetings (Oltmanns et al., 2004; Paulhus, 1998), and success in public performance (Wallace & Baumeister, 2002). The individual interacting with the narcissist in the emerging zone experiences satisfaction with the relationship and a sense of excitement from interacting with such a confident individual (Foster, Shrira, & Campbell, 2006). Conversely, both people have negative experiences when they are in the enduring zone. Interestingly, Campbell and Campbell (2009) suggest that although narcissism is tied to some negative social consequences in the enduring zone, the greatest consequences are experienced by individuals interacting with the narcissist, mainly because in the enduring zone, narcissism is still associated with positive self-views (Campbell & Campbell, 2009). The narcissistic individual is therefore likely to continue to engage in the same behaviors because he or she receives rewards in both zones, but he or she is motivated to have at least some relationships in the emerging zone where there is maximal benefit. On the other hand, the person interacting with the narcissist in the enduring zone is motivated to

end the relationship because he or she is no longer being rewarded (Campbell & Campbell, 2009).

This model can be useful in understanding relationships between individuals with high levels of narcissism and others with whom they come into contact, but the behaviors associated with the emerging and enduring zones of adolescent relationships as they relate to narcissism have yet to be addressed. As previously noted, perceptions of individuals with high levels of narcissism usually follow a pattern of initial admiration and positive regard to later dislike. It is possible that the same characteristics that were initially deemed attractive by others (e.g., confidence, authority) can be seen as unappealing after the passage of time or that other features of narcissism (e.g., exploitativeness, grandiosity) become more apparent. Nonetheless, there are likely specific behaviors in which the individual engages that perpetuate the downfall of his or her interpersonal relationships. For example, it is possible that aggression is a strategy used to protect one's status or self-esteem in the enduring zone. However, the question still remains, what strategies, if any, are used in the emerging zone? Moreover, do these strategies have social benefits?

It is important to note that although individuals with high levels of narcissism may demonstrate aggression upon initial interactions, this aggression may be confined to experimental situations toward anonymous victims (e.g., Bushman & Baumeister, 1998; Bushman et al., 2009; Thomaes et al., 2008). It is possible that, in such circumstances, the individual believes that he or she will not need to form a relationship with the other individual and that the other individual therefore possesses no lasting social value. It is unlikely that individuals with high levels of narcissism typically begin their relationships

with aggression. In fact, as noted above, narcissism is associated with positive initial appraisals from peers, as individuals with narcissistic traits are viewed as more popular and confident upon first impressions, and other people usually initially view narcissists as charming and charismatic (Morf & Rhodewalt, 2001).

Based on the extant literature and the similarities between narcissism and Machiavellianism (e.g., interpersonal manipulation, desire of social power, lack of empathy for others), individuals with high levels of narcissism may engage in a similar approach of using both prosocial and coercive strategies to achieve their desired powerful status. Specifically, it appears that individuals with high levels of narcissism may use one set of strategies when they first interact with people (e.g., ingratiation) and then use other strategies (e.g., aggression) to maintain their position within the social group or reduce threats after negative information from the environment. Machiavellianism, on the other hand, may not be associated with the same pattern of early use of prosocial tactics and later use of aggression. Instead, Machiavellian tendencies would be expected to relate to both types of strategies throughout interpersonal interactions.

In short, if narcissism is associated with the use of bistrategic control strategies, such an approach to interpersonal interactions would help shed light on some of the findings in the narcissism literature. For example, insofar as narcissistic individuals are initially viewed as charming and outgoing (Paulhus, 1998), they may be using prosocial methods (e.g., providing compliments, being helpful) to fit in with the group or establish relationships with other people. Eventually, narcissists are disliked by peers (Paulhus, 1998), which may be due to the fact that these individuals have begun to use coercive

methods to achieve their goals (e.g., intimidation, aggression, exploitation) once the initial access to relationships has been obtained.

### Interpersonal Perception and the Social Relations Model

Central to the present study is the idea that the way in which people interact is guided by their beliefs about each other (Kenny, 1994). Within social psychology, these beliefs about other individuals are called “person perceptions” (Kenny, 1994). Although person perception is different from object perception, social psychology research has traditionally treated the two as equivalent. Specifically, research has typically studied such perception questions by presenting participants with “vignettes” about hypothetical characters and then eliciting feedback about the character (Kenny & La Voie, 1984). The use of vignettes has advantages (e.g., efficiency, experimental control); however, vignettes are not reciprocal (Kenny & La Voie, 1984). The participant perceives the target but not vice-versa, and the perceiver is not concerned with how the target views him or her (Kenny, 1994). Therefore, to study interpersonal perception, a different research model was developed.

Warner, Kenny, and Soto (1979) first introduced the idea of analyzing a round-robin research design to study interpersonal processes. This design allowed for the reciprocal and natural occurrences of social interactions to be examined. That is, the round-robin design allowed researchers to explore the relationship effects between perceiver and target (Warner et al., 1979). Since the round-robin design allowed for the examination of co-variance between individuals, actual interpersonal interactions could be examined instead of assessing perceiver effects through the use of video or vignettes. Therefore, the Social Relations Model (SRM) (Kenny & La Voie, 1984) has been



implemented in research on interpersonal processes. The SRM has made it possible to examine not only perceiver and target effects but also unique interpersonal relations among participants. The SRM divides interpersonal perceptions into four components. How person A generally views other people is called the perceiver effect, how person A is generally viewed by other people is defined as the target effect, how person A uniquely views person B is the relationship effect (Kenny, 1994). The SRM also views interpersonal perceptions as occurring on individual, group, and dyadic levels. Perceiver and target effects occur at the individual level (i.e., the relationship between person A and person B is not accounted for), whereas relationship effects occur at the dyadic level. The amount of perceiver variance is examined to assess the presence of *assimilation*. Conversely, the amount of target variance assesses the degree of *consensus* (Kenny, 1994). Variance for both the perceiver and target are analyzed in the SRM via a two-step process of variance partitioning (Kenny, 1994). For the dyadic variables, variance is partitioned using random effects ANOVA. Results of the ANOVA yield main effects for the perceiver and the target. Then, the main effects are tested for significance using the null assumption, that variance is equal to zero. If dyadic variable variances are significantly different from zero, they can be used to test correlations with other significant variables. If variances are not significantly different, then further analyses should not be conducted with these variables. A lack of significant variance either means that participants' scores are not due to characteristics of the rater (nonsignificant perceiver variance) or that raters do not agree on ratings of a participant (i.e., nonsignificant target variance).

The SRM is ideal for the current study because it allows for the examination of how individuals with high levels of narcissism are viewed by their peers throughout the relationship while taking into account the fact that ratings are not independent (i.e., how person A is perceived relative to peers is partly a function of how person A rates his or her peers).

The SRM examines nine basic questions regarding interpersonal perception. The first is the question of *assimilation*, which examines the amount of perceiver variance in the sample. In other words, it examines whether people's perceptions of other people are contingent on the person completing the rating. In essence, do certain individuals have a tendency to rate others higher-or lower- on certain traits? *Consensus* examines target variance, whether people are generally seen the same way by others. Consensus basically measures whether individuals agree on their rating of a peer. *Uniqueness* explores whether people see other people idiosyncratically as individual units discrete from one another. *Reciprocity* measures whether people see each other similarly, whereas *Assumed Reciprocity* measures whether people think other people see them as they see themselves. *Target Accuracy* examines whether people's views of other people are correct by measuring the association between people's perception of other people, and other people's actual position on a trait. *Meta-accuracy* explores whether people know how they are seen by others. *Assumed Similarity* concerns whether perceivers see others as the perceivers see themselves. Lastly, *Self-other Agreement* examines whether perceivers view others as others view themselves. Consensus and self-other agreement are most relevant for the present study because it seeks to explore how individuals with higher

levels of narcissism and Machiavellianism are seen by others and whether peer perceptions of these individuals are congruent with their self perceptions.

## CHAPTER II

### PRESENT STUDY

The present study aimed to extend previous literature by examining peer perceptions of prosocial and coercive behaviors as related to narcissism—an issue that has been studied for a similar construct, Machiavellianism. That is, this study investigated whether narcissism was associated with peer perceptions of prosocial and coercive behaviors depending on the extent or phase of the interpersonal relationship and whether peers' ratings of likability changed later in the relationship as a function of narcissism. A link has been well-established between narcissism and aggression (e.g., Bushman et al., 2009; Stucke, 2003; Twenge & Campbell, 2003; Washburn et al., 2004), yet individuals with high levels of narcissism are initially regarded positively (Morf & Rhodewalt, 2001). Such a pattern may suggest that different behavioral strategies are used during different points in the relationship. Although individuals with narcissistic tendencies presumably only use prosocial behaviors in the initial stages of relationships, individuals who also have high levels of Machiavellianism may have a tendency to use these behaviors more frequently because they presumably engage in these strategies throughout their interpersonal relationships. In the present study, the level of aggression was not expected to vary across time as a function of Machiavellianism, but narcissism was expected to predict increases in such coercive behaviors as relationships continued. Exploring these issues in an adolescent population is important because during adolescence, interpersonal relationships become particularly important and can have either a beneficial or deleterious effect on well being (Steinberg & Silverberg, 1986).

The SRM provided an important framework for this study because it enabled the variance in peer perceptions to be parceled into perceiver, target, and relationship components. The SRM also allowed for correlation of personality variables (e.g., narcissism and Machiavellianism) with individual-level variance components (i.e., perceiver effects and targets effects) (Marcus, & Kashy, 1995). Moreover, the SRM allowed for the evaluation of how individuals high on narcissistic traits were viewed by their peers (i.e., target effect), both before and after they had spent an extensive amount of time with them. Statistically, SRM allowed for the examination of the interdependence of social interaction data (Warner et al., 1979), which was particularly important for the current study given that the independence of scores assumption would have been violated by other statistical analyses because individual participants served as both perceivers and targets.

### Hypotheses

It was hypothesized that there would be significant target variance (*consensus*) for the social influence variables (i.e., prosocial resource control, coercive resource control, likeability, and unlikeability; Hypothesis 1). That is, it was expected that the cadet being rated (target) would account for a significant portion of the variance for all of the dyadic social influence variables listed above. It was also hypothesized that there would be a positive self-by-perceiver correlation for narcissism and prosocial behavior at Time 1 (i.e., within 2-3 weeks of initiating the relationship; Hypothesis 2). Moreover, it was hypothesized that there would be positive self-by-target correlations for narcissism and prosocial behavior at Time 1 (i.e., within 2-3 weeks of initiating the relationship) and narcissism and coercive behavior at Time 2 (i.e., approximately 3-4 months later;

Hypothesis 3). In regards to Hypotheses 2 and 3, self-reported narcissism was expected to be correlated with self and peer reports of prosocial behavior at Time 1 and peer reports of coercive behavior at Time 2. Hypotheses 2 and 3 were based on previous literature regarding interpersonal relationship patterns of people with high levels of narcissism. Specifically, individuals with high levels of narcissism tend to initially be liked by others, but that initial attraction soon fades (Morf & Rhodewalt, 2001), suggesting that they may use prosocial tactics to gain acceptance in social situations, but they may later use aggressive or other antisocial means to maintain their desired social status (Raskin et al. 1991).

It was hypothesized that there would be significant target-by-target correlations for peer (i.e., perceiver) ratings of likability and prosocial behavior and peer ratings of unlikability and coercive behavior (Hypothesis 4). It was also hypothesized that narcissism would be correlated with peer-rated likability at Time 1 (e.g., “I like [Cadet A]”) but with peer-rated unlikability (e.g., “I do not like [Cadet A]”) at Time 2 (Hypothesis 5). In other words, it was hypothesized that there would be a positive narcissism-by-target correlation for likability and unlikability at Times 1 and 2, respectively. Furthermore, there was expected to be a positive personality-by-personality correlation between self-reported narcissism and Machiavellianism, based on previous literature (Jonason & Webster, 2010; McHoskey, 1995; Hypothesis 6). Also consistent with previous literature (Hawley, 2003), it was further hypothesized that there would be positive personality-by-self and personality-by-target correlations between Machiavellianism and bi-strategic resource control. In particular, self-reported Machiavellianism was expected to be positively correlated with both self- and peer-

reported prosocial and coercive resource control at both Time 1 and Time 2 (Hypothesis 7). Lastly, it was expected that self- and peer-reported strategy use would be positively correlated, consistent with previous literature (e.g., Card, Stucky, Sawalani, & Little, 2008; Golmaryami & Barry, 2010; Hypothesis 8), indicating self-other agreement.

### Participants

Participants were males and females ranging in age from 16-18 ( $M = 16.63$ ,  $SD = .68$ ) years enrolled in a military-style intervention program for youths—referred to as cadets while in the program—who have dropped out of school. Participants were considered at-risk based on their having dropped out of school. The intervention program is voluntary (i.e., not court-ordered or state-mandated). Eighty-six (86) participants (59 males and 27 females) completed data for Time 1 analyses. Time 1 data were collected in eight groups of males (two groups of six, two groups of seven, three groups of eight, and one group of nine participants) and four female groups (two groups of six, a group of seven, and a group of eight participants). Fifty-seven participants (45 males and 12 females) completed data for Time 2 analyses. Ten people were excluded from Time 2 data analyses due to insufficient group sizes (i.e., two groups consisted of two members per group and two groups consisted of three members per group), leaving a total 47 participants (43 males, 4 females) for Time 2 analyses. Time 2 data consisted of seven male groups (a group of four, a group of five, three groups of six, one group of seven, and one group of nine participants) and one female group of four participants. At Time 2, several youth refused to participate, which decreased group size substantially. Time 2 group sizes were further reduced due to participants prematurely leaving the program. Overall, the sample consisted mostly of European Americans (60.3% at Time 1 and at

71.7% Time 2), with 37% and 26.4% of the participants identifying themselves as African American at Times 1 and 2, respectively. The remaining participants (2.7% at Time 1 and 1.9% at Time 2) identified themselves as being from other ethnic backgrounds.

## Materials

### *Demographic information*

Participants completed a demographic questionnaire to document their race, age, and sex. Race and age were obtained for descriptive purposes.

### *Narcissistic Personality Inventory for Children (NPIC; Barry et al., 2003)*

The NPIC is derived from the Narcissistic Personality Inventory (NPI) for adults (Raskin & Terry, 1988) and contains 40 forced-choice items. The NPI was developed to measure non-pathological narcissism (Raskin & Hall, 1979), and the NPIC is used to measure this conceptualization of narcissism in child or adolescent populations. For each item, respondents choose one statement from a pair (e.g., “I can talk my way out of anything” or “I try to accept what happens to me because of my behavior”) and then rate the selected statement as being “sort of true” or “really true” for them. The NPI, on which the NPIC is based, has shown good psychometric properties (Raskin & Terry, 1988) and has been widely used in research. Barry and colleagues found an internal consistency coefficient  $\alpha = .82$  for the NPIC in their sample of similar adolescents as those for the present study (Barry, Grafeman et al., 2007). Additionally, the NPIC has been significantly, yet moderately, correlated with other measures of narcissism, such as the Narcissism scale on the Antisocial Processing Screening Device and the Child Narcissism Scale (see Barry & Wallace, 2010). The present study revealed an internal



consistency coefficient alpha of .85 for the total NPIC score. In addition, an adaptive narcissism score was created by combining items that were derived from the Authority and Self-sufficiency subscales of the NPI, consistent with previous uses of the scale (Barry, Frick, & Killian, 2003; Barry, Grafeman et al., 2007). A moderate internal consistency coefficient (i.e.,  $\alpha = .68$ ) was revealed for the adaptive narcissism composite. A maladaptive narcissism score was created by combining the analogous NPIC items from the Entitlement, Exploitativeness, and Exhibitionism subscales of the NPI. The maladaptive composite had an internal consistency .73 for the present sample.

*Children's Machiavellianism Scale (Kiddie Mach; Nachamie, 1969)*

The Kiddie Mach is a widely used 20-item self-report questionnaire designed to measure Machiavellian orientation in youth. Items are scored on a 5-point Likert-type scale ranging from 1 (*disagree very much*) to 5 (*agree very much*). Statements include items such as “The best way to get along with people is to tell them things that make them happy” and “Sometimes you have to cheat a little to get what you want.” All items deal with the respondent's view of human nature and interpersonal trust. Although there is very limited psychometric evidence on the Kiddie Mach (or any youth Machiavellianism measure), Andreou (2004) found an internal consistency coefficient of  $\alpha = .79$  for the Kiddie Mach in her sample of children aged 9 to 12. The present study revealed an internal consistency coefficient of  $\alpha = .67$ .

*Resource-Control Strategy Inventory (RCSI; Hawley, Shorey, & Alderman, 2009)*

The RCSI is a 12-item self-report scale designed to measure prosocial and coercive behaviors toward others. Responses are made on a 7-point Likert-type scale ranging from 1 (i.e., *strongly disagree*) to 7 (i.e., *strongly agree*). A modification to the

wording on the scale was made for the present sample. Specifically, the stem “I access resources by” was changed to “I influence others by” to promote comprehension.

Participants were asked to rate the degree to which they use prosocial strategies of control (i.e., I influence others “by promising something in return,” “by helping others even if they don’t really need it,” “by doing something nice for someone,” “by offering my friendship,” “by flattering others,” and “by extending invitations to others”) and coercive strategies of control (i.e., I influence others “by acting like I’m angry,” “by bullying,” “by tricking or manipulating others,” “by dominating others,” “by forcing them to give me things,” and “by convincing others I’m their friend when I’m not”). Each construct (i.e., prosocial, coercive strategies) was measured as a sum of six items. High scores indicate higher endorsement of employing the strategy. Hawley et al. (2009) found acceptable alpha reliabilities for the prosocial (.75) and coercive (.81) scales in a sample of college students. The current sample demonstrated internal consistency coefficients of .65 and .88 for the prosocial and coercive scales, respectively.

### *Peer Ratings*

To assess perceived strategy use and its effect on interpersonal relationships, peer ratings were obtained on participants’ use of prosocial and coercive behaviors. The items from the RCSI were modified to be read in third person and to list the name of each specific cadet in the item (e.g., “Cadet A influences others by promising something in return”). Each adolescent rated how well each item described a specific peer participant based on a seven-point Likert-type scale with 1 being *not at all* and 7 being *very much*. A round robin design was used where each participant provided these ratings on every other participant in their group, the participants also rated each other. For example, one

participant (“Cadet A”) completed the RCSI Scale for each of the other members of his or her group. Therefore, Cadet A completed the scale based on his or her interactions with Cadet B, Cadet C, Cadet D, and so forth who also provided ratings on Cadet A as well as the other members of the group. Eight additional items were added to the peer rating scale, with items using a 7-point continuum. Four items included statements with positive qualities (i.e., “I like [Cadet A]”), (i.e., “I respect [Cadet A]”, “I admire [Cadet A]”), [Cadet A] is a leader) on one side of the continuum and the ratings for the corresponding negative qualities at the other end of the continuum (i.e., I don’t like [Cadet A]”), (i.e., “I don’t respect [Cadet A]”, “I don’t admire [Cadet A]”), [Cadet A] is a follower) . Additionally, four meta-perception items were generated for the supplemental items, (e.g., “[Cadet A] likes me,” “[Cadet A] thinks I’m a leader.”). The RCSI measures were pre-printed with each cadet’s last name on them to decrease the opportunity for confusion and errors.

## CHAPTER III

### PROCEDURE

Participation in the study was voluntary, and informed consent was received prior to data collection. Consent was obtained from the program director, who served as guardian *ad litem* for cadets during their program enrollment. The youth were given the opportunity to agree or refuse to participate in the study through signing an informed assent form. Refusal to participate in the study did not affect a youth's status in the intervention program.

The data for the present study were collected in two phases. The first time point (Time 1) consisted of two sessions. During the first session, participants completed the NPIC, Kiddie Mach, a demographic questionnaire, and the RCSI. In session two of Time 1, participants completed the peer-reported strategy use scale. Each participant rated each member of his or her group (i.e., approximately 5 to 8 other individuals) on several items using the peer rating scale. Groups were randomly assigned within each platoon of cadets who lived and attended activities together. Data collection for Time 1 required approximately two 45-minute sessions, with sessions taking place over the course of one week in January 2011. For Time 2 (May 2011), participants completed the Resource Control Strategy Inventory scale and the peer rating scale again, this time rating the same peers that they rated at Time 1 provided that these peers remained in the study. Cadets completed all measures in a classroom setting.

## CHAPTER IV

### ANALYSES

The SRM analyses were performed using the SOREMO program. SOREMO was particularly suitable, as it allows for participants to serve as both perceivers (i.e., perceivers) and targets (i.e., targets; Kenny, 1994). Therefore, it accounts for individuals' perceptions of others (i.e., perceiver effects), how individuals are perceived by others (i.e., target effects), and the relationships between individuals (i.e., perceiver-by-target interactions). The SOREMO program also allows input of three types of measures: dyadic, self, and personality (Kenny, 1994). For dyadic variables (i.e., Peer Rating Scale), every member of a group is rated by every other member (i.e., round-robin design). Self measures are self-reported levels of a construct. Therefore, on self measures (e.g., prosocial and coercive control strategies), the individual rates only him or herself. Personality variables are variables that can be measured at the trait level and are assumed to be fairly stable, unlike self measures that can vary across targets and situations (Kenny, 1994). All three types of measures were collected for the current study. Self measures were collected for prosocial and coercive control strategies. Personality variables included Machiavellianism, gender, and narcissism (i.e., overall narcissism, adaptive narcissism, and maladaptive narcissism). Dyadic variables included prosocial and coercive resource control strategies, as well as leadership, respect, admiration, likability, and their metaperceptions. Time 2 analyses excluded metaperceptions for leadership and admiration due to variable input limitations of the SOREMO program.

As previously stated, SOREMO assesses perceiver, target, and relationship effects via an ANOVA. Perceiver effects are the effects that are a function or characteristics of

the rater, whereas target effects can be attributed to the person being rated, and relationship effects are presumably reflective of the interactions of the individuals involved (Kenny, 1994). Although the current study consisted of data collection at two time points, it did not include multiple administrations of the dyadic variables, so error variance is not controlled for. Therefore, the relationship variance was not interpreted in this study.

## CHAPTER V

## RESULTS

Table 1 provides descriptive statistics for the self-reported variables for participants who completed both phases of the study.

Table 1

*Descriptive Statistics of Self-Reported Variables for Completers (N = 47)*

	Mean	Standard Deviation	Minimum	Maximum	Possible Range	Skewness
NPIC total	52.11	17.61	8	107	0-120	.53
NPIC adaptive	19.67	7.16	4	37	0-42	.05
NPIC maladaptive	21.04	8.11	3	47	0-54	.70
Machiavellianism	24.80	6.70	15	39	0-80	.43
Age	16.56	.70	16	18	16-18	.87

*Note:* Standard error for skewness = .35.

Significance testing of the variance components was conducted to determine which of the effects (i.e., perceiver, target) significantly differed from zero at the .05 level of significance (see Table 2).

Table 2

*Variance Partitioning for Dyadic Variables*

Variable	Perceiver-Time 1	Target-Time 1	Perceiver-Time 2	Target-Time 2
Prosocial Con.	.29*	.07	.29*	.08
Coercive Con.	.23*	.16*	.30*	.13
Like	.18*	.15*	.21*	.12
Meta-Like	.28*	.09*	.29*	.08
Leader	.16*	.14*	.20*	.22
Respect	.22*	.13*	.27	.13*
Admire	.28*	.09*	.25*	.12
Meta-Leader	.36*	.01	.41*	.04
Meta-Respect	.29*	.10*	.39*	.02
Meta-Admire	.29*	.08	.26*	.18
Prosocial 2	-	-	.33*	.14*
Coercive 2	-	-	.45*	.15
Like 2	-	-	.20*	.08
Meta-like 2	-	-	.25*	.07
Leader 2	-	-	.23*	.07
Respect 2	-	-	.21*	.08
Admire 2	-	-	.48*	.08
Meta-respect 2	-	-	.39*	

*Note:* Because relationship and error variance were combined, relationship variance was not submitted to significance testing. Variable names followed by "2" indicate that the scores are derived from Time 2 analyses. \* $p < .05$



For Time 1, all perceiver variances were significant and interpretable. However, target variances for meta-leader, meta-admire, and prosocial resource control were not significantly different from zero. For Time 2, the perceiver variances for respect and for prosocial and coercive resource control strategies were not significant. Therefore, correlations involving perceiver variance for these variables could not be interpreted. Only respect and prosocial resource control had significant target variance at Time 2. Consequently, only target correlations involving respect and Time 2 prosocial resource control could be interpreted. Variables that did not have significant partner variance were not included in further interpretation because the raters in the group did not agree on their ratings of peers. In other words, there was a lack of consensus. Scores obtained on those items were not necessarily because the target elicited this perception from peers (Kenny, 1994). Similarly, only variables with significant perceiver variance were interpreted, because this indicates that scores are at least partially a function of the rater (i.e., perceiver).

Hypothesis 1 predicted that there would be significant target variance (*consensus*) for the social influence variables (i.e., prosocial resource control, coercive resource control, likeability, and unlikeability; Hypothesis 1). As stated above, at Time 1, the target variance for prosocial resource control was not significant  $r = .07, p > .05$ , but the target variance for coercive resource control  $r = .16, p < .05$ , likeability and unlikeability,  $r = .15, p < .05$ , were significant. At Time 2, only prosocial resource control,  $r = .14, p < .05$ , had a significant amount of target variance. Coercive resource control ( $r = .13, p > .05$ ), as well as likeability and unlikeability ( $r = .12, p > .05$ ), were not significant. Therefore, Hypothesis 1 was partially supported. Hypothesis 2 predicted that there would

be a positive self-by-perceiver correlation for narcissism and prosocial behavior at Time 1 (i.e., within 2-3 weeks of initiating the relationship; Hypothesis 2). The Time 1 personality-by-self correlation between narcissism and prosocial behavior was non-significant,  $r = -.06, p > .05$ . Therefore, Hypothesis 2 was not supported. Moreover, self-reported narcissism was expected to be related to peer-reported prosocial behavior at Time 1 and peer reports of coercive behavior at Time 2 (Hypothesis 3). Due to a lack of significant target variance, the Time 1 personality-by-target correlation for prosocial behavior and the Time 2 personality-by-target correlation for coercive behavior could not be explored. Therefore, Hypothesis 3 was not supported.

Hypothesis 4 predicted that there would be positive target-by-target correlations for likability and prosocial behavior, as well as unlikability and coercive behavior. For Time 1, correlations for prosocial behavior could not be explored due to the lack of significant target variance for prosocial behavior. However, Time 1 target-by-target correlations revealed that peer-reported coercive strategy use was negatively correlated with ratings of likability,  $r = -.83, p < .05$ , indicating that individuals who were seen as using more coercive behavior strategies were liked less by their peers. For Time 2, correlations for coercive behavior could not be interpreted due to insignificant target variance. Target-by-target correlations for prosocial resource control and likability were not significant,  $r = -.60, p > .05$  at Time 2. Therefore, Hypothesis 4 was only partially supported.

It was also hypothesized that there would be a positive self-reported narcissism-by-target correlation for likability and unlikability at Time 1 and Time 2, respectively. At Time 1, the personality-by-target correlation for narcissism and likability was not

significant,  $r = -.03$ ,  $p < .05$ . At Time 2, the narcissism-by-unlikability correlation was unable to be interpreted due to lack of significant target variance. Therefore, Hypothesis 5 was not supported. Furthermore, there was expected to be a positive correlation between self narcissism and Machiavellianism (Hypothesis 6). The correlation for narcissism and Machiavellianism for participants who completed the study was significant,  $r = .45$ ,  $p < .01$  (see Table 3).

Table 3

*Correlations among Personality Variables for Completers (N = 47)*

	NPIC	NPIC adaptive	NPIC maladaptive	Machiavellianism	Sex
NPIC total					
NPIC adaptive	.91***	-			
NPIC maladaptive	.83***	.68***	-		
Machiavellianism	.45**	.31*	.63***	-	
Sex	-.17	-.10	-.31*	-.24	-

*Note:* Standard error for skewness = .35. Male=1, Female=2

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Additionally, the correlation between self-reported adaptive narcissism and Machiavellianism,  $r = .31$ ,  $p < .05$ , and the correlation between Machiavellianism and maladaptive narcissism,  $r = .63$ ,  $p < .001$  were significant. Therefore, Hypothesis 6 was supported. The Hotelling-Williams test was conducted to test for equality of the two

correlations (i.e., Machiavellianism with maladaptive narcissism vs. Machiavellianism with adaptive narcissism). Results from this method produced a  $t$  of 1.53. The *critical t* for 47 degrees of freedom is 1.68, when alpha is .05.

Hypothesis 7 predicted a positive personality-by-self and personality-by-target correlation between Machiavellianism and bi-strategic resource control (i.e., the use of both prosocial and coercive control). There was a significant personality-by-self correlation between Machiavellianism and coercive resource control at Time 1,  $r = .44$   $p < .01$ , and Time 2,  $r = .46$   $p < .01$ . However, the personality-by-self correlations for Machiavellianism and prosocial resource control were not significant at Times 1 or 2. The personality-by-target correlation for Machiavellianism and prosocial resource control was not able to be interpreted at Time 1. The Machiavellianism-by-target reported coercive resource control correlation was not significant at Time 1  $r = -.03$ ,  $p > .05$ . The Time 2 correlation for Machiavellianism was not able to be interpreted due to insignificant target variance for coercive resource control, and the Machiavellianism-by-self reported prosocial correlation was not significant at Time 2  $r = .45$ ,  $p > .05$ . These results indicate that individuals who reported higher levels of Machiavellianism also reported using more coercive behavioral strategies at both time points. Therefore, Hypothesis 7 was partially supported.

It was expected that self- and peer-reported prosocial and coercive strategy use would be positively correlated, consistent with previous literature, indicating self-other agreement (Hypothesis 8). Self-by-target correlations for Time 1 could not be interpreted for prosocial resource control due to insignificant variance. No significant correlations emerged for coercive resource control,  $r = .18$ ,  $p > .05$  (Time 1),  $r = .23$ ,  $p > .05$  (Time

2). In regard to Time 2 analyses, only correlations involving prosocial strategies could be interpreted, but no significant correlations emerged at Time 1,  $r = .38, p > .05$  or Time 2,  $r = -.20, p > .05$ . Therefore, Hypothesis 8 was not supported.

#### Post Hoc Analyses

*Post Hoc* exploratory analyses were conducted to determine if any interesting results emerged. Meta-perceptions were reviewed to determine how participants thought they were perceived by peers. Meta-perceptions are the perceptions of another person's perception. Stated differently, meta-perceptions focus on how a person thinks others view him or her. Analyses regarding meta-perceptions were assessed in particular due to recent evidence that narcissists have some level of insight regarding how they are viewed by others (Carlson, Vazire, & Oltmanns, 2011). Because previous research shows that individuals with higher levels of narcissism strive for respect, admiration, and often occupy leadership positions (Campbell & Campbell, 2009), meta-perceptions regarding leadership, admiration, likeability, and respect were examined. All Post Hoc results should be interpreted cautiously due to the increased risk of Type I error. Specifically, due to the number of tests conducted, there is an increased likelihood that one or more significant results are due to chance.

#### *Perceiver-by-Target Correlations*

An interesting perceiver-by-target correlation emerged regarding resource control strategies. At Time 1, there was a significant coercive-by-respect correlation,  $r = .46, p < .05$ , indicating that people who used more coercive resource control strategies were respected more by their peers. For Time 2, only prosocial perceiver-by-target correlations were able to be explored. No significant correlations emerged.

### *Personality-by-Perceiver Correlations*

Time 1 analyses revealed correlations between overall narcissism and prosocial resource control,  $r = -.28, p < .05$ , indicating that, at the initial phase of the relationship, participants with higher levels of narcissism viewed others as using less prosocial resource control. Similarly, adaptive narcissism was also negatively correlated with prosocial resource control,  $r = -.32, p < .05$ . Time 2 analyses, revealed a significant correlation between Machiavellianism and coercive resource control,  $r = .42, p < .05$ . Individuals with higher levels of Machiavellianism tended to see others as using more coercive control strategies at the later phase of their relationship.

### *Personality-by-Target Correlations*

At Time 1, the personality-by-target correlation for sex and leadership was significant,  $r = -.34, p < .05$ , indicating that males were seen by their same-sex peers as higher on leadership than were females. Time 1 personality-by-target analyses also revealed significant correlations for meta-respect and overall narcissism,  $r = -.37, p < .05$ , adaptive narcissism  $r = -.33, p < .05$ , and maladaptive narcissism,  $r = -.38, p < .05$ , indicating that individuals with higher levels of narcissism were viewed by others as having less respect for them at the initial stage of the relationship. No significant Time 2 correlations emerged.

### *Self-by-Perceiver Correlations*

At Time 1, there was a significant correlation for self-reported coercive resource control and perceptions of peer coercive resource control,  $r = .29, p < .05$ , suggesting that individuals who saw themselves as using more coercive control strategies also saw others

as using more coercive control strategies. No significant self-by-perceiver correlations emerged for Time 2.

### *Personality-by-Self Correlations*

Personality and self measures were only collected at Time 1. However, only analyses for participants who completed Time 2 measures are reported. Although attrition may have slightly affected personality variable correlations, *t*-tests revealed no significant differences on personality variables between participants who completed the study and those who did not (Machiavellianism  $t(87) = .57, p > .05$ , narcissism  $t(87) = .87, p > .05$ ). Several personality-by-self correlations emerged. Coercive resource control was correlated with overall narcissism,  $r = .47, p < .01$ , adaptive narcissism,  $r = .40, p < .01$ , maladaptive narcissism,  $r = .46, p < .01$ , and Machiavellianism,  $r = .55, p < .001$ . Thus, individuals with higher levels of overall, adaptive, and maladaptive narcissism reported using more coercive control behavior strategies. Similarly, individuals with higher levels of Machiavellianism reported using coercive resource control strategies relatively often, and they perceived others as using more coercive behavior strategies at Time 2.

### *Target-by-Target Correlations*

The data revealed several noteworthy target-by-target correlations at Time 1 (see Table 4). It should be noted that although many correlations were fairly strong in magnitude, the coefficients themselves may be somewhat misleading. Specifically, the SOREMO program computes correlations within groups and then averages them, weighting the averages by group size.

Table 4

*Target by Target Effect for Time 1*

	Leader	Resp.	Admire	Coerci	MResp	Like	Mlike
Coerci	-.46	-.71*	-.51	1.0	-.67	-.83	-.74
Like	.85*	1.0*	.99*	-.82*	.91	1.0	.91
Mlike	.58	1.0*	.93*	-.74*	1.0**	.91	1.0
Leader	1.0	.98*	1.0**	-.46	.68	.85	.58
Respec	.98*	1.0	.96*	-.71	.95	1.0	.97*

Note: Coerci=Coercive resource control, Mlike=Meta-like, MResp= Meta-respect

\* $p < .05$ . \*\* $p < .01$ .

Leadership was significantly correlated with likability,  $r = .84$ ,  $p < .05$ , respect,  $r = .98$ ,  $p < .05$ , and admiration  $r = 1.00$ ,  $p < .001$ . These results indicate that individuals who were seen as leaders were also seen as likable and respectable and were admired by their peers. Respect was negatively correlated with coercive resource control,  $r = -.70$ ,  $p < .05$ , and positively correlated with like,  $r = .99$ ,  $p < .05$ , meta-like,  $r = .96$ ,  $p < .05$ , meta-respect,  $r = .95$ ,  $p < .05$ , and admiration,  $r = .95$ ,  $p < .05$ . These results indicate that individuals who were seen as respectable were also seen as using less coercive control strategies, were seen as likable, as liking and respecting others, and were rated higher on leadership and admiration. Admiration was correlated with likability,  $r = .98$ ,  $p < .05$ , meta-like,  $r = .93$ ,  $p < .05$ , and meta-respect,  $r = .79$ ,  $p < .05$ , indicating that people who



were seen by their peers as admirable were also seen as likable and as liking and respecting others. Meta-respect was correlated with likability,  $r = .90, p < .05$ , and meta-like,  $r = .95, p < .05$ , indicating that individuals who were seen as respecting others were also seen as likable and as liking others. Lastly, like and meta-like were significantly correlated,  $r = .91, p < .05$ , indicating that individuals who were seen as likable were also seen as liking others. Only two target variables were interpretable from Time 2 analyses (i.e., Time 2 measured respect and prosocial resource control). Neither revealed any significant correlations with the other peer-reported variables of interest.

#### *Perceiver-by-Perceiver Correlations*

Time 1 data revealed several significant perceiver effects. Leadership was significantly correlated with likability,  $r = .75, p < .05$ , respect,  $r = .76, p < .05$ , admiration,  $r = .72, p < .001$ , meta-like,  $r = .67, p < .05$ , and meta-respect,  $r = .60, p < .05$ . These results indicate that individuals who saw others as leaders also saw others as likable, respectable, admirable, and as liking and respecting others. Respect was correlated with like,  $r = .95, p < .01$ , meta-like,  $r = .80, p < .05$ , and meta-respect,  $r = .81, p < .05$ . These results indicate that individuals who saw others as respectable also saw others as likable and as liking and respecting others. Admiration was correlated with likability,  $r = .67, p < .05$ , indicating that people who saw their peers as admirable also saw their peers as likable. Coercive behavioral control strategies were negatively correlated with likability,  $r = -.28, p < .05$ , indicating that individuals tended to like their peers less when they viewed them as using coercive control strategies. Meta-respect was correlated with likability,  $r = .80, p < .05$ , and meta-like,  $r = .86, p < .01$ , indicating that individuals who saw their peers as respecting others also saw their peers as likable and as

liking others. Lastly, like and meta-like were significantly correlated,  $r = .91, p < .01$ , indicating that individuals who saw their peers as likable also saw their peers as liking others.

Time 2 perceiver correlations were unable to be interpreted for prosocial and coercive resource control due to insignificant perceiver variance. At Time 2, leadership was significantly correlated with admiration,  $r = .82, p < .05$ , indicating that individuals who saw others as leaders also saw them as admirable. No other significant correlations emerged.

## CHAPTER VI

### DISCUSSION

This study represents one of the first attempts to investigate the association between resource control strategies and narcissism in adolescents and to do so while considering peer perceptions of these strategies. Additionally, this study is one of the few to utilize Kenny's (1994) SRM model among adolescents in a residential setting.

Although narcissism was expected to influence the use of resource control at both the initial and later phases of relationships, the results instead indicated that Machiavellianism played an important role at both phases. More specifically, individuals who reported higher levels of Machiavellianism also reported using more coercive behavioral strategies at both the initial assessment and in a follow-up five months later. Self-reported narcissism was only associated with self-reported use of more coercive control behavioral strategies in the later phases of their interpersonal relationships (i.e., at the five-month follow-up in the present study). Therefore, although Machiavellianism and narcissism were both associated with self-reports of engaging in coercive control strategies, when these strategies are initiated or perceived by others appears to differ as a function of Machiavellianism (early) and narcissism (later).

These findings support some aspects of Campbell and Campbell's (2009) conceptual model, in that individuals with higher levels of narcissism reportedly engaged in negative behaviors in the later stages of their peer relationships in the residential program. However, the results did not support the idea that narcissists are initially perceived in a favorable light because they refrain from using coercive strategies. This finding may be partly a function of the sample (i.e., at-risk adolescents) or the living

arrangements. Specifically, both perceivers and targets were considered “at-risk” based on their enrollment in a residential program; therefore, these individuals may have been more likely to distrust or dislike peers who appeared to assume an authority role. Furthermore, participants in previous studies (e.g., Carlson, Vazire, & Oltmanns, 2011; Paulhus, 1998) were assessed for likability after brief (i.e., hours) acquaintances with each other. Participants in the current study had lived together for several days before initial rating were collected.

The perception of others’ interpersonal strategies may also be influenced by one’s own level of Machiavellianism, as individuals with higher levels of Machiavellianism perceived others as using more coercive behavior strategies at Time 2. It is also important to note that at Time 1, individuals who saw themselves as using more coercive control strategies also saw others as using more coercive control strategies. Thus, there may have been a general tendency for adolescent participants who engaged in coercive behavior strategies to at least assume that others engage in similar behaviors. It is also possible that individuals who engaged in coercive strategies elicited reciprocation from others.

The personality-by-self correlations for Machiavellianism and prosocial resource control were not significant at Times 1 or 2. However, previous research has shown an association between Machiavellianism and prosocial resource control (Hawley, 2003). Hawley (2003) found a link between Machiavellianism and prosocial resource control in a community sample of children and adolescents in fifth through tenth grade. Participants in the present study were in a military-style residential facility for youth who have dropped out of school. Therefore, results may have differed due to the sample (i.e., community versus residential) or due to different established resource control styles.

Specifically, youth in the current sample may have dropped out or been expelled from traditional school due to coercive and disruptive behavior patterns. Therefore, youth in the present sample, regardless of their personality tendencies, may actually be less likely to use prosocial resource control when compared to peers in traditional academic settings.

In addition to the timing of the implementation of coercive strategies, there were interesting correlations involving coercive behavior strategies and peer perceptions. Individuals who were seen as using more coercive behavioral strategies were liked less, yet more respected, by their peers. Taken together, these results indicate that the use of coercive resource control strategies may be both helpful and detrimental to interpersonal relationships, depending on one's social goals. Although peers may tend to respect individuals who use coercion, they generally do not like them as much. This issue may be especially pertinent when examining interpersonal relationships among individuals with higher levels of narcissism and Machiavellianism, as such individuals strive for power and respect (Machiavelli, 1513/1966; Morf & Rhodewalt, 2001). Individuals with higher levels of narcissism were viewed by others as having less respect for them, which could further contribute to strained interpersonal relationships experienced by these individuals.

More importantly, individuals who were seen as respectable were also seen as using less coercive control strategies. However, as mentioned above, another finding indicated that individuals who self-reported more coercive behavior strategies were respected relatively more by their peers. Therefore, it appears that there are two paths to respect: one path involves (at least the self-presentation of) high amounts of coercive resource control, whereas the other path emphasizes less coercive methods. It is possible that individuals who use more coercive control are respected by others out of fear and

that individuals who use less coercive control are seen as respectable because of their lack of aggressive or hostile means of relating to others and attaining resources. It is important to note that it is also possible that certain individuals who identified themselves as using more coercive control were viewed as respectable by their peers because their self-reported coercive methods were not apparent to their peer group.

Another set of findings has implications for discussions of adaptive narcissism. For example, individuals who were seen as leaders were also seen as likable, respectable, and were admired by their peers. Moreover, individuals who saw others as leaders also saw them as likable, respectable, admirable, and as liking and respecting others. However, adaptive narcissism was not correlated with being liked or respected by peers. Taken together, it appears that the central characteristics of adaptive narcissism (e.g., leadership, authority) are related to being respected and liked by peers but that not all of the features of adaptive narcissism are beneficial in terms of peer acceptance. For example, a link has been drawn between adaptive narcissism and peer-reported relational aggression (Golmaryami & Barry, 2010), which supports the idea that some characteristics of adaptive narcissism are potentially damaging to peer relationships. Thus, further efforts should be devoted to understanding the specific characteristics of narcissism that might be related to positive or negative social outcomes, particularly from the perspective of peers.

In addition, participants with higher levels of overall and adaptive narcissism viewed others as using less prosocial resource control. These findings suggest that if one views oneself as higher on adaptive aspects of narcissism such as leadership, authority, and self-sufficiency, he or she may view others as using less prosocial methods due to a

lack of trust for other individuals or possibly a more accurate picture of others' interpersonal style. In particular, individuals who view themselves as leaders or are self-sufficient may be more insightful of other people's actions and means of control. Another plausible explanation is that individuals with higher levels of overall and adaptive narcissism may be less apt to believe that others possess those same worthy characteristics (e.g., leadership, self-sufficiency). This style of thinking could potentially cause social strain if the other person is aware of the narcissist's beliefs. This notion is consistent with results from the current study that adaptive narcissism was not correlated with being liked by peers and is also consistent with previous studies linking adaptive narcissism to negative peer perceptions (e.g., Golmaryami & Barry, 2010).

The current study also shed light on the relation between narcissism and Machiavellianism among adolescents. As previously mentioned, narcissism and Machiavellianism have been correlated in adults and share several of the same defining characteristics (e.g., interpersonal manipulation, desire for social power, lack of empathy for others; Jonason & Webster, 2010; McHoskey, 1995). Narcissism and Machiavellianism are both theoretically linked to a desire for power and respect (Morf & Rhodewalt, 2001; Machiavelli, 1513/1966). Based on peer reports in the present study, one way in which an individual might obtain admiration and respect may be to establish a mutually respectful relationship with others. Although, as noted above, using coercive methods of control was also correlated with respect in the current study, developing a positive, reciprocal relationship might be the optimal method of gaining respect and admiration. Specifically, high coercion was associated with being respected but was also associated with low likability. Low coercion, on the other hand, was correlated with

being respected without any negative perceptions of the person. Although seeking the respect of others is an aspect of narcissism and Machiavellianism, and coercive strategies may be one way to gain this respect, it appears that other strategies may also be effective without the additional social fallout. Aside from continuous efforts to gain respect, it remains unclear whether individuals with higher levels of narcissism or Machiavellianism would show respect to others if there was no apparent social gain from doing so.

### Limitations

One of the primary limitations of the current study was the attrition rate from Time 1 to Time 2. Eighty-six (86) participants completed data for Time 1 analyses, but only 57 participants completed data for Time 2 analyses. Additionally, 10 people were excluded from Time 2 data analyses due to insufficient group sizes (i.e., two groups consisted of two members per group, and two groups consisted of three members per group), leaving a total of only 47 participants. More importantly, the number of participants in the groups changed substantially. Time 1 data were collected in eight groups of males (i.e., two groups of six, two groups of seven, three groups of eight, and one group of nine participants) and four female groups (i.e., two groups of six, a group of seven, and a group of eight participants). Group membership was maintained for participants who remained in the study such that Time 2 data consisted of seven male groups (i.e., a group of four, a group of five, three groups of six, one group of seven, and one group of nine participants) and one female group of four participants. Lashley and Kenny (1998) state that in terms of power and the ability to detect significant differences, a few large groups (e.g., 8 participants) are preferable to several small groups. Specifically, larger group sizes have more data points which would help increase the



reliability of the SRM estimate parameters. More accurate estimate parameters decrease the amount of variance between parameters, resulting in heightened ability to detect significant differences (Lashley & Kenny, 1998). Due to attrition in the current study, many of the proposed hypotheses were unable to be explored due to insignificant target variance at Time 2. Therefore, relations may have existed between the variables of interest but were unable to be examined because the target variance was not significantly different from zero. It is important to note that *post hoc* analyses revealed that participants who ended the study prematurely did not differ on personality variables from participants who completed the study.

Another limitation of this study is its generalizability. This study consisted of adolescent participants from a residential treatment setting. Although this population was beneficial in terms of measuring peer relationships over an extended period of time in adolescents who experienced close contact with each other, the findings of this study may not be generalizable to adolescents in other contexts. The sample also consisted of adolescents exclusively from the southern United States, further reducing the generalizability of the present results to adolescents from other regions. Additionally, this sample consisted of a relatively small number of female participants. Due to the reduction in female groups for Time 2 data, specific gender effects on the questions of interest were not able to be investigated. Also, although this study included both self- and peer-report data, it may be beneficial to collect observational data. Observational data would help eliminate socially desirable responding and may help depict a more complete picture of the resource control styles that adolescents utilize in peer interactions.

### Future Directions

Future studies should attempt to address the limitations of the present study by, for example, focusing on obtaining data from multiple regions of the United States and from community samples as well. There is also a need for further investigations in female samples or at least in samples that include a higher proportion of female participants. More importantly, several of the hypotheses were unable to be tested due to inadequate group sizes. Future studies should include larger groups and attempt to reduce attrition rates to explore hypotheses that remain untested.

Using SRM models to test peer perceptions of resource control can increase our understanding of interpersonal relationships among individuals with certain personality traits. Research identifies negative peer relations for individuals with higher levels of narcissism (Paulhus, 1998), but the specific behaviors associated with the strain in, or dissolution of, relationships have yet to be determined. Additionally, results from the current study suggest that individuals with higher levels of Machiavellianism also engage in some of the same negative interpersonal behaviors that could play a role in the types of interpersonal problems that have been theoretically linked to narcissism. This study was an initial attempt to explore which behaviors may exacerbate negative peer relationships and which personality features make engaging in these behaviors more probable. Continued exploration of this topic may help researchers and clinicians promote positive peer relationships among adolescents with higher levels of narcissism, Machiavellianism, or similar personality characteristics. This issue is of even greater importance considering the impact that peers have on adolescent development and overall adjustment.

## APPENDIX A

## HUMAN SUBJECTS REVIEW

## The University of Southern Mississippi

## I. Project Goals

The proposed study represents an attempt to learn more about the relation between certain personality features (i.e., narcissism and Machiavellianism) and peer perceptions of the use of prosocial and coercive behavior strategies among an at-risk sample of adolescents. In addition, the proposed study will examine the relational problems associated with narcissism and Machiavellianism from the perspective of adolescent peers.

Bistrategic control, as described by Hawley (2003), is the use of both prosocial (e.g., cooperation) and coercive (e.g., aggression) methods to gain access to valuable social resources. The association between Machiavellianism and bistrategic control has been demonstrated in adults (Christie & Geis, 1968) as well as children (Hawley, 2003). Machiavellianism shares several features with narcissism. Due to these similarities, it is hypothesized that high levels of Machiavellianism and high levels of narcissism could be associated with the same bistrategic methods of control. Specifically, higher levels of narcissism may be associated with initial prosocial behavior followed by coercive behavior later in a relationship. The purpose of this study is to investigate whether individuals with higher levels of narcissism are perceived to engage in prosocial or antisocial behaviors depending on the extent or phase of the interpersonal relationship and whether their control strategies translate to peers' ratings of likability.

The proposed study will utilize Kenny's (1994) social relations model to explore the interpersonal correlates of narcissism and Machiavellianism from the perspective of peers.

## II. Protocol

Participants. Approximately 75 adolescents, referred to as "cadets," ages 16 to 18 enrolled in a 22-week military-style intervention program for youth who have dropped out of high school (i.e., the Mississippi Youth Challenge Academy) will be recruited to participate in this study. One female and two male platoon of cadets will be randomly selected to participate in the proposed study. The adolescents who attend the intervention program do so on a voluntary basis and are not court- or state-mandated to attend. Their participation in the proposed study will in no way affect their program status, and information collected from the scales to be used in this study will be kept strictly confidential with exceptions described in detail on the assent forms. Consent will be obtained from the program director, who serves as guardian *ad litem* for cadets during their program enrollment, at the time that adolescents enroll in the intervention program . Participants will also be informed of the purpose and procedures of the project as well as give written assent. Alternatively, participants who are age 18 or older will complete a consent form.

Procedure. The data for the proposed study will be collected in two phases. The first time point (Time 1) will consist of two sessions. During the first session, self-report measures of personality and strategy use (i.e., Narcissistic Personality Inventory for Children, Children's Machiavellianism Scale, Resource Control Strategy Inventory) will

be individually administered to the participants both orally, to assist with reading comprehension of items, and on paper. In session two of Time 1, participants will complete the peer-reported strategy use scale. Each participant will rate each member of his/her group (i.e., approximately 8-10 other individuals) on several items using the peer rating scale. Data collection for Time 1 will require approximately two 45-minute sessions, with sessions taking place over the course of one week in January 2011. For Time 2, participants will complete the Resource Control Strategy Inventory and the peer rating scale again in May 2011 for the same group of peers that they rated at Time 1. Cadets will complete all measures in a classroom setting consisting of approximately 10-20 participants. Further, special care will be taken to ensure that the participants are seated at least one chair apart to protect the confidentiality of their answers. The measures to be used in the proposed study are listed below and are provided as Appendixes B-E:

Narcissistic Personality Inventory for Children (NPIC; Barry, Frick, & Killian 2003)

Children's Machiavellianism Scale (Kiddie Mach; Nachamie, 1969)

Resource Control Strategy Inventory (RCSI; Hawley, Shorey, & Alderman, 2009)

Peer Ratings of Resource Control

The self-report measures to be used on the proposed project have been commonly used in adolescent populations, with no known adverse effects. In addition, research (Bell-Dolan, Foster, & Sikora, 1989; Bell-Dolan & Wessler, 1994; Hayvren & Hymel, 1984) has suggested that the collection of peer ratings do not have adverse effects on participants.

Further, research has also indicated that the collection of data from peers does not negatively effect future peer interactions (Hayvren & Hymel, 1984). Participants will have the right to refuse to answer any question. Confidentiality procedures will be in place so a randomly assigned participant number will be used on each of the questionnaires. That is, the respondents' names will not be on the questionnaires to protect the confidentiality of responses. For peer ratings, the last name of the cadet being rated will be written at the top of the questionnaire, and participants will be reminded of the importance of keeping their responses confidential both during and after the data collection session.

### III. Benefits

The results from the project will increase understanding in risk and protective factors related to various self-concepts, personality traits, and adolescent interpersonal relationships. More specifically, the project will help understand the resource control strategies related to narcissism and the social consequences of such behaviors. Exploring these issues in an adolescent population is important because during adolescence, interpersonal relationships become particularly important and can have either a beneficial or deleterious effect on well being. Examining strategy use as it relates to narcissism may provide insight on some of the personality factors and interpersonal strategies that are associated with harmonious or potentially strained adolescent peer relationships.

### IV. Potential Risks and Safeguards

The measures to be used for the proposed project and analogous measures have been widely used in child and adolescent samples. Therefore, there are expected to be minimal risks for participants in the proposed project. However, it is always possible that participants may be adversely affected by the self-report or peer report procedures. Thus, participants will be instructed to alert the researchers if they experience any emotional distress during or after the study as a result of their participation. Any such incidents will be reported to the IRB.

In addition, the protection of participants will be addressed in the following manner:

- 1) Participation is voluntary. Those individuals wishing not to participate will be allowed to refuse.
- 2) Responding to each question is voluntary. Therefore, participants will only provide the information that they are willing to disclose on the questionnaires.
- 3) To better maintain privacy and confidentiality:
  - i. Participants will be assigned a number that will be placed on all information. Although the names of participants will appear on each of the peer-rated questionnaires, a data coding procedure will be used to de-identify the information following data collection. Following the completion of data collection, each participant's name will be replaced with their assigned identification number prior to data entry. Therefore, names and other identifying information will not be able to be directly matched to participants' questionnaire responses. The assigned number will be used only to allow researchers to match collected self-report information with peer ratings collected in this project.
  - ii. Data entry procedures will not involve any identifying information beyond the assigned participant number.
  - iii. All information provided by participants within the course of this project will be kept strictly confidential unless information is disclosed that indicates that an individual is a threat to him/herself or others or if there is reason to suspect any ongoing abuse or neglect. In such an instance, the staff at the Mississippi Youth Challenge Academy will be immediately notified.
  - iv. For the peer rating session, participants will be asked to not discuss their responses with others after completing the session. Furthermore, special care will be taken to ensure that the participants are seated at least one chair apart to protect the confidentiality of their answers.

#### V. Informed Consent

Informed consent for adolescent participants will be provided by the program director who serves as guardian *ad litem* for cadets. This arrangement is consistent with research conducted at the Mississippi Youth Challenge Academy by other researchers from The University of Southern Mississippi. In addition, a detailed assent procedure will be provided, after which individuals volunteering to participate will give written assent. Assent forms will be presented by researchers as a script to explain the purpose and procedures of the project. Signed assent forms will be kept in a separate file and will also be treated with confidentiality.



## APPENDIX B

## NPI-C

Name\_\_\_\_\_

Date \_\_\_\_\_

Gender \_\_\_\_\_

Age\_\_\_\_\_

Grade\_\_\_\_\_

Directions: We have some sentences below, and we are interested in which choice best describes what you like or how you feel. Sometimes you may find it hard to decide between the two choices. Please tell me the one that is most like you. We are interested only in *your* likes or feelings, not in how others feel about these things or how one is supposed to feel. There are no right or wrong answers, so please be honest in your answers.

Let me explain how these questions work. Here is a sample question. I'll read it out loud and you follow along with me.

**Sample Item**

Really    Sort of

Sort of

Really

True    True

True    True

for Me    for Me

for Me    for Me

		I am jealous when  good things happen to  other people.	Or	I am happy when  good things happen to  other people.		
--	--	---	----	---	--	--

First, I want you to decide whether the sentence on the left side describes you better because you are jealous when good things happen to others, or whether the sentence on the right side describes you better because you are happy when good things happen to other people. Don't mark anything down yet, but first decide which sentence describes you better, and go to that side.

Now that you have decided which sentence describes you better, I want you to decide whether that is only "sort of true" or "really true" for you. If it's only sort of true, then put an X in the box under "sort of true"; if it's really true for you, then put an X in that box under "really true".

For each sentence you only mark one box. Sometimes it will be on one side of the page, another time it will be on the other side of the page, but you can only check ONE box for each sentence. You don't mark both sides, just the one that describes you better.

OK, that one was just for practice. Now we have some more sentences which I'm going to read out loud. For each one, just check one box, the one that goes with what is most true for you.

Really Sort of

Sort of

Really

True True

True

True

for Me for Me

for Me

for Me

		1. I am good at getting other people to do what I want.	Or	I am not good at getting other people to do what I want.		
		2. I like to show off the things that I do well.	Or	I do not show off the things that I do well.		
		3. I would do almost anything if someone dared me to.	Or	I am usually a careful person.		
		4. Sometimes, I get embarrassed when people say nice things about me.	Or	I know I am good because everybody keeps telling me so.		
		5. It scares me to think about me ruling the world.	Or	If I ruled the world, it would be a better place.		
		6. I can usually talk	Or	I try to accept what		

		my way out of anything.		happens to me because of my behavior.		
		7. I like to blend in with other people around me.	Or	I like to be the center of attention.		
		8. I will be a famous person.	Or	I do not think about being famous much.		
		9. I am no better or no worse than most people.	Or	I think I am a special person.		
		10. I am not sure if I would be a good leader.	Or	I think I am a good leader.		
		11. I say what's on my mind.	Or	I wish I would tell people what I think more often.		

Really Sort of

Sort of

Really

True True

True

True

for Me for Me

for Me

for Me

		12. I like to be the boss of other people.	Or	I don't mind following orders.		
		13. It is easy to get people to do what I want.	Or	I don't like it when I try to get people to do what I want.		
		14. I make sure that people appreciate what I do.	Or	People usually appreciate what I do.		
		15. I don't like to show off my looks.	Or	I like to show how good I look.		
		16. I can tell what people are like.	Or	Sometimes it's hard to know what people are like.		
		17. If I know what I'm doing, I like to make decisions.	Or	I like to make decisions all the time.		
		18. I just try to be	Or	I want the world to		

		happy.		think that I am something special.		
		19. My looks are nothing special.	Or	I like to see how good I look.		
		20. I try not to be a show off.	Or	I usually show off when I get the chance.		
		21. I always know what I'm doing.	Or	Sometimes I'm not sure of what I'm doing.		
		22. Sometimes I need other people to help me get things done.	Or	Most of the time, I don't need anyone else to help get things done.		
		23. Sometimes I tell good stories.	Or	Everybody likes to hear my stories.		
		24. I expect to get a lot from other people.	Or	I like to do things for other people.		

Really Sort of

Sort of

Really

True True

True

True

for Me for Me

for Me

for Me

		25. I won't be happy until I get everything that I should get.	Or	I am happy whenever something good happens.		
		26. When people say good things about me, I get embarrassed.	Or	I like it when people say good things about me.		
		27. I want to control other people.	Or	I'm not really interested in controlling others.		
		28. I don't pay attention to the latest craze or fashion.	Or	I like to start new crazes and fashions.		
		29. I like to look at myself in the mirror.	Or	I am not really interested in looking at myself in the mirror.		
		30. I really like to be	Or	I am not comfortable		

		the center of attention.		being the center of attention.		
		31. I can do anything with my life that I want to.	Or	People can't always do whatever they want with their lives.		
		32. Being an expert about something doesn't mean that much to me.	Or	Other people seem to know that I am an expert on some things.		
		33. I would rather be a leader.	Or	I don't care if I'm a leader or not.		
		34. I am going to be a great person.	Or	I hope that I am going to be great.		
		35. People sometimes believe what I tell them.	Or	I can make anybody believe anything I want them to.		



Really Sort of

Sort of

Really

True True

True

True

for Me for me

for Me

for Me

		36. I have always been a leader.	Or	It takes a while to become a good leader.		
		37. I wish someone would write a story about my life someday.	Or	I don't like for people to be nosy about my life.		
		38. I get upset when other people don't notice how I look.	Or	I don't mind looking like just another person when other people are around.		
		39. I am able to do more things than other people.	Or	I can learn a lot from other people.		
		40. I am just like everybody else.	Or	I am an outstanding person.		

## APPENDIX C

## KIDDIE MACH

**Directions: Read each sentence, and check the box below each one that matches how much you agree or disagree with each sentence.**

1. Most people are good and kind.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

2. The best way to get along with people is to tell them things that make them happy.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

3. You should do something only when you are sure it is right.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

4. It is smartest to believe that all people will be mean if they have a chance.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

5. You should always be honest, no matter what.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

6. Sometimes you have to hurt other people to get what you want.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

7. Most people won't work hard unless you make them do it.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

8. It is better to be ordinary and honest than famous and dishonest.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

9. It's better to tell someone why you want him to help you than to make up a good story to get him to do it.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

10. Successful people are mostly honest and good.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

11. Anyone who completely trusts anyone else is asking for trouble.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

12. A criminal is just like other people except that he is stupid enough to get caught.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

13. Most people are brave.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

14. It is smart to be nice to important people even if you don't really like them.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

15. It is possible to be good in every way.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

16. Most people can not be easily fooled.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

17. Sometimes you have to cheat a little to get what you want.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

18. It is never right to tell a lie.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

19. It hurts more to lose money than to lose a friend

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

20. Never tell anyone why you did something unless it will help you.

☐ **Disagree Very Much** ☐ **Disagree a Little** ☐ **Agree a Little** ☐ **Agree Very Much**

## APPENDIX D

## RESOURCE CONTROL STRATEGY INVENTORY (RCSI)

**Directions: Read each sentence and circle which one best describes you.**

1. I influence others by promising something in return.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree*  
*Strongly Agree*

2. I influence others by helping others even if they don't really need it.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree*  
*Strongly Agree*

3. I influence others by doing something nice for someone

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree*  
*Strongly Agree*

4. I influence others by offering my friendship

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree*  
*Strongly Agree*

5. I influence others by flattering them.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree*  
*Strongly Agree*

6. I influence others by extending invitations to them.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree*  
*Strongly Agree*

7. I influence others by acting like I'm angry.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree*  
*Strongly Agree*

8. I influence others by bullying.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree  
Strongly Agree*

9. I influence others by tricking or manipulating them.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree  
Strongly Agree*

10. I influence others by dominating them.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree  
Strongly Agree*

11. I influence others by forcing them to give me things.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree  
Strongly Agree*

12. I influence others by convincing them I'm their friend when I'm not.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree  
Strongly Agree*

## APPENDIX E

### PEER RATING SCALE

Directions: Read each sentence and circle which one best describes[Cadet A].

1. [Cadet A] influences others by promising something in return.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree*  
*Strongly Agree*

2. [Cadet A] influences others by helping others even if they don't really need it.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree*  
*Strongly Agree*

3. [Cadet A] influences others by doing something nice for someone.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree*  
*Strongly Agree*

4. [Cadet A] influences others by offering them his/her friendship

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree*  
*Strongly Agree*

5. [Cadet A] influences others by flattering them.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree*  
*Strongly Agree*

6. [Cadet A] influences others by extending invitations to them.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree*  
*Strongly Agree*

7. [Cadet A] influences others by acting like he/she is angry.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree*  
*Strongly Agree*

8. [Cadet A] influences others by bullying.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree*  
*Strongly Agree*

9. [Cadet A] influences others by tricking or manipulating them.

*Strongly Disagree   Somewhat Disagree   Disagree   Neutral   Agree   Somewhat Agree*  
*Strongly Agree*

10. [Cadet A] influences others by dominating them.





I don't respect [Cadet A]

I respect [Cadet A]

17.        [1]        [2]        [3]        [4]        [5]        [6]        [7]

I don't admire [Cadet A]

I admire [Cadet A]

18.        [1]        [2]        [3]        [4]        [5]        [6]        [7]

[Cadet A] thinks I'm a follower    [Cadet A] thinks I'm a leader

19.        [1]        [2]        [3]        [4]        [5]        [6]        [7]

[Cadet A] doesn't respect me

[Cadet A] respects me

20.        [1]        [2]        [3]        [4]        [5]        [6]        [7]

[Cadet A] doesn't admire me

[Cadet A] admires me

## APPENDIX F

## INSTITUTIONAL REVIEW BOARD NOTICE OF COMMITTEE ACTION



## THE UNIVERSITY OF SOUTHERN MISSISSIPPI

Institutional Review Board

118 College Drive #5147  
 Hattiesburg, MS 39406-0001  
 Tel: 601.266.6820  
 Fax: 601.266.5509  
 www.usm.edu/irb

**HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE  
 NOTICE OF COMMITTEE ACTION**

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
  - The risks to subjects are reasonable in relation to the anticipated benefits.
  - The selection of subjects is equitable.
  - Informed consent is adequate and appropriately documented.
  - Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
  - Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
  - Appropriate additional safeguards have been included to protect vulnerable subjects.
  - Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
  - If approved, the maximum period of approval is limited to twelve months.
- Projects that exceed this period must submit an application for renewal or continuation.

**PROTOCOL NUMBER: 10110403**

**PROJECT TITLE: Narcissism and Interpersonal Relationships: Examining the use of Prosocial and Coercive Behavior Strategies Among Adolescents in a Residential Setting**

**PROPOSED PROJECT DATES: 09/27/2010 to 07/30/2011**

**PROJECT TYPE: Dissertation**

**PRINCIPAL INVESTIGATORS: Marion Wallace**

**COLLEGE/DIVISION: College of Education & Psychology**

**DEPARTMENT: Clinical Psychology**

**FUNDING AGENCY: N/A**

**HSPRC COMMITTEE ACTION: Expedited Review Approval**

**PERIOD OF APPROVAL: 11/04/2010 to 11/03/2011**

*Lawrence A. Hosman*  
 \_\_\_\_\_  
 Lawrence A. Hosman, Ph.D.  
 HSPRC Chair

*11-06-2010*  
 \_\_\_\_\_  
 Date

## REFERENCES

- Andreou, E. (2004). Bully/victim problems and their association with Machiavellianism and self-efficacy in Greek primary school children. *British Journal of Educational Psychology, 74*, 297-309.
- Barnett, M. A., & Thompson, S. (1985). The role of perspective taking and empathy in children's Machiavellianism, prosocial behavior, and motive for helping. *Journal of Genetic Psychology, 146*, 295-306.
- Barry, C. T., Chaplin, W. F., & Grafeman, S. J. (2006). Aggression following performance feedback: The influences of narcissism, feedback valence, and comparative standard. *Personality and Individual Differences, 41*, 177-187.
- Barry, C. T., Frick, P. J., Adler, K. K., & Grafeman, S. J. (2007). The predictive utility of narcissism among children and adolescents: Evidence for a distinction between adaptive and maladaptive narcissism. *Journal of Child and Family Studies, 16*, 508-521.
- Barry, C. T., Frick, P. J., & Killian, A. L. (2003). The relation of narcissism and self-esteem to conduct problems in children: A preliminary investigation. *Journal of Clinical Child and Adolescent Psychology, 32*, 139-152.
- Barry, C. T., Grafeman, S. J., Adler, K. K., & Pickard, J. D. (2007). The relations among narcissism, self-esteem, and delinquency in a sample of at-risk adolescents. *Journal of Adolescence, 30*, 933-944.
- Barry, C. T., & Wallace, M. T. (2010). Current considerations in the assessment of youth narcissism: Indicators of pathological and normative development. *Journal of Psychopathology and Behavioral Assessment, 32*, 479-489.

- Baumeister, R. F., Bushman, B. J., & Campbell, K.W. (2000). Self-esteem, narcissism, and aggression: Does violence result from low self-esteem or from threatened egotism? *Current Directions in Psychological Science*, 9, 26-29.
- Bogart, L. M., Benotsch, E. G., & Pavlovic, J. D. (2004). Feeling superior but threatened: The relation of narcissism to social comparison. *Basic and Applied Social Psychology*, 26, 35-44.
- Bradlee, P. M., & Emmons, R. A. (1992). Locating narcissism within the interpersonal circumplex and the Five-Facet model. *Personality and Individual Differences*, 13, 821-830.
- Brook, J. S., & Newcomb, M. D. (1995). Childhood aggression and unconventionality: Impact on later academic achievement, drug use, and work force involvement. *Journal of Genetic Psychology*, 156, 393-410.
- Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: Does self-love or self-hate lead to violence? *Journal of Personality and Social Psychology*, 75, 219-229.
- Bushman, B. J., Baumeister, R. F., Thomaes, S., Ryu, E., Begeer, S., & West, S. G. (2009). Looking again, and harder, for a link between low self-esteem and aggression. *Journal of Personality*, 77, 427-446.
- Campbell, W. K. (2005). When you love a man who loves himself: How to deal with a one-way relationship. Chicago, IL: Sourcebooks Casablanca.
- Campbell, W. K., & Campbell, S. M. (2009). On the self-regulatory dynamics created by the peculiar benefits and costs of narcissism: A contextual reinforcement model and examination of leadership. *Self and Identity*, 8, 214-232.

- Campbell, W. K., Rudich, E. A., & Sedikides, C. (2002). Narcissism, self-esteem, and the positivity of self-views: Two portraits of self-love. *Personality and Social Psychology Bulletin*, 28, 358-368.
- Card, N. A., Stucky, B. D., Sawalani, G. M., & Little, T. D. (2008). Direct and indirect aggression during childhood and adolescence: A meta-analytic review of gender differences, intercorrelations, and relations to maladjustment. *Child Development*, 79, 1185-1229.
- Carlson, E. N., Vazire, S., & Oltmanns, T. F. (2011). You probably think this paper's about you: Narcissists' perceptions of their personality and reputation. *Journal of Personality and Social Psychology*, 101, 185-201.
- Cherulnik, P. D., Way, J. H., Ames, S., & Hutto, D. B. (1981). Impressions of high and low Machiavellian men. *Journal of Personality*, 49, 388-400.
- Christie, R., & Geis, F. L. (1968). Some consequences of taking Machiavelli seriously. In E. F. Borgatta & W. W. Lambert (Eds.), *Handbook of personality theory* (pp. 959-973). Chicago, IL: Rand McNally.
- Christie, R., & Geis, F. L. (1970). *Studies in Machiavellianism*. New York, NY: Academic Press.
- Coie, J. D., & Dodge, K. A. (1998). Aggression and antisocial behavior. In W. Damon, & N. Eisenberg (Eds.), *Handbook of child psychology, 5th ed.: Vol 3. Social, emotional, and personality development* (pp. 779-862). Hoboken, NJ: John Wiley & Sons.

- Coleman, L., & Carter, S. (2005). Underage 'binge' drinking: A qualitative study into motivations and outcomes. *Drugs: Education, Prevention and Policy*, 12, 125–136.
- Duan, L., Chou, C., Andreeva, V., & Pentz, M. (2009). Trajectories of peer social influences as long-term predictors of drug use from early through late adolescence. *Journal of Youth and Adolescence*, 38, 454-465.
- Fehr, B., Samson, D., & Paulhus, D. L. (1992). The construct of Machiavellianism: Twenty years later. *Advances in personality assessment*, Vol. 9 (pp. 77-116). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Foster, J. D., Shrira, I., & Campbell, W. K. (2006). Theoretical models of narcissism, sexuality, and relationship commitment. *Journal of Social and Personal Relationships*, 23, 367-386.
- Gecas, V., & Burke, P. J. (1995). Self and identity. In K. S. Cook, G. Fine, & J. S. House (Eds.), *Sociological perspectives on social psychology* (pp. 41–67). Boston, MA: Allyn and Bacon.
- Golmaryami, F. N., & Barry, C. T. (2010). The associations of self-reported and peer-reported relational aggression with narcissism and self-esteem among adolescents in a residential setting. *Journal of Clinical Child and Adolescent Psychology*, 39, 128-133.
- Gustafson, S. B., & Ritzer, D. R. (1995). The dark side of normal: A psychopathy-linked-pattern called aberrant self-promotion. *European Journal of Personality*, 9, 147-183.

- Gurtman, M. B. (1992). Trust, distrust, and interpersonal problems: A circumplex analysis. *Journal of Personality and Social Psychology*, 62, 989-1002.
- Hare, R. D. (1985). Comparison of procedures for the assessment of psychopathy. *Journal of Consulting and Clinical Psychology*, 53, 7-16.
- Hawley, P. H. (2003). Prosocial and coercive configurations of resource control in early adolescence: A case for the well-adapted Machiavellian. *Merrill-Palmer Quarterly*, 49, 279-309.
- Hawley, P. H., & Little, T. D. (1999). Winning some and losing some: A social relations approach to social dominance in toddlers. *Merrill-Palmer Quarterly*, 45, 185-214.
- Hawley, P. H., Little, T. D., & Pasupathi, M. (2002). Winning friends and influencing peers: Strategies of peer influence in late childhood. *International Journal of Behavioral Development*, 26, 466-474.
- Hawley, P. H., Shorey, H. S., & Alderman, P. M. (2009). Attachment correlates of resource-control strategies: Possible origins of social dominance and interpersonal power differentials. *Journal of Social and Personal Relationships*, 26, 1097-1118.
- Heilbron, N., & Prinstein, M. J. (2010). Adolescent peer victimization, peer status, suicidal ideation, and nonsuicidal self-injury. *Merrill-Palmer Quarterly*, 56, 388-419.
- Jonason, P. K., & Webster, G. D. (2010). The dirty dozen: A concise measure of the dark triad. *Psychological Assessment*, 22, 420-432.
- Kenny, D. A. (1994). Using the social relations model to understand relationships. In R. Erber, R. Gilmour (Eds.). *Theoretical frameworks for personal relationships* (pp. 111-127). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

- Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. New York, NY U: Guilford Press.
- Kenny, D. A., & La Voie, L. (1984) The social relations model In L. Berkowitz (Ed), *Advances in experimental social psychology* (Vol XVIII) Orlando, FL Academic.
- Kerig, P. K., & Sink, H. E. (2011). The new scoundrel on the schoolyard: Contributions of Machiavellianism to the understanding of youth aggression. In C. T. Barry, P. K. Kerig, K. K. Stellwagen, & T. D. Barry (Eds.), *Narcissism and Machiavellianism in youth: Implications for the development of adaptive and maladaptive behavior* (pp. 193-212). Washington, D.C.: American Psychological Association.
- LaFontana, K. M., & Cillessen, A. H. N. (2010). Developmental Changes in the Priority of Perceived Status in Childhood and Adolescence. *Social Development, 19*, 130-147.
- LaFreniere P. J., & Charlesworth. W. R. (1987). Effects of friendship and dominance status on preschooler's resource utilization in a cooperative/competitive paradigm. *International Journal of Behavioral Development, 10*, 345-358.
- Lashley, B. R., & Kenny, D. A. (1998). Power estimation in social relations analyses. *Psychological Methods, 3*, 328-338.
- Little, T. D., Hawley, P. H., Henrich, C. C., & Marsland, K. (2002). Three views of the agentic self: A developmental synthesis. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 389-404). Rochester, NY: University of Rochester Press.



- Liu, C. (2008). The relationship between Machiavellianism and knowledge sharing willingness. *Journal of Business and Psychology*, 22, 233-240.
- Machiavelli, N. (1950). *Discourses*. London, England: Routledge & Paul. (Original work published 1513).
- Machiavelli, N. (1966). *The Prince*. New York, NY: Bantam. (Original work published 1513).
- Marcus, D. K., Kashey, D. A. (1995). The social relations model: A tool for group psychotherapy research. *Journal of Counseling Psychology*, 42, 383-389.
- McHoskey, J. W. (1995). Narcissism and Machiavellianism. *Psychological Reports*, 77, 755.
- McHoskey, J. W. (1999). Machiavellianism, intrinsic versus extrinsic goals, and social interest: A self-determination theory analysis. *Motivation & Emotion*, 23, 267-283.
- McHoskey, J. W, Worzel, W., & Szyarto, C. (1998). Machiavellianism and psychopathy. *Journal of Personality and Social Psychology*, 74, 192-210.
- Merten, D. E. (2004). Securing her experience: Friendship versus popularity. *Feminism and Psychology*, 14, 361-365.
- Miller, J. D., Campbell, W. K., Young, D. L., Lakey, C. E., Reidy, D. E., Zeichner, A., & Goodie, A.S. (2009). Examining the relations among narcissism, impulsivity, and self-defeating behaviors. *Journal of Personality*, 77, 761-794.
- Miller, J. D., Gaughan, E. T., & Pryor, L. R. (2008). The Levenson Self-Report Psychopathy Scale: An examination of the personality traits and disorders associated with the LSRP fperceivers. *Assessment*, 15, 450-463.

- Morf, C. C., & Rhodewalt, F. (2001). Unraveling the paradoxes of narcissism: A dynamic self-regulatory processing model. *Psychological Inquiry*, 12, 177-196.
- Nachamie, S. (1969). Machiavellianism in children: Construction and validation of the Children's Mach Scale. *American Psychologist*, 21, 628.
- Neumann, C. S., & Hare, R. D. (2008). Psychopathic traits in a large community sample: Links to violence, alcohol use, and intelligence. *Journal of Consulting and Clinical Psychology*, 76, 893-899.
- Oltmanns, T. F., Friedman, J. N., Fiedler, E. R., & Turkheimer, E. (2004). Perceptions of people with personality disorders based on thin slices of behavior. *Journal of Research in Personality*, 38, 216-229.
- Palmen, H., Vermande, M. M., Deković, M., & Van Aken, M. A. G. (2011). Machiavellianism in elementary school children: Risk and adaptation. In C. T. Barry, P. K. Kerig, K. K. Stellwagen, & T. D. Barry (Eds.), *Narcissism and Machiavellianism in youth: Implications for the development of adaptive and maladaptive behavior* (pp. 233-249). Washington, DC: American Psychological Association.
- Paulhus, D. L. (1998). Interpersonal and intra psychic adaptiveness of trait self-enhancement: A mixed blessing? *Journal of Personality and Social Psychology*, 74, 1197-1208.
- Paulhus, D. L., & Williams, K. M. (2002). The Dark Triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, 36, 556-563.

- Raskin, R., & Hall, C. S. (1979). A narcissistic personality inventory. *Psychological Reports, 45*, 590.
- Raskin, R., Novacek, J., & Hogan, R. (1991). Narcissistic self-esteem management. *Journal of Personality and Social Psychology, 60*, 911-918.
- Raskin, R., & Terry, H. (1988). A principal-components analysis of the narcissistic personality inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology, 54*, 19-38.
- Rhodewalt, F., & Morf, C. C. (1998). On self-aggrandizement and anger: A temporal analysis of narcissism and affective reactions to success and failure. *Journal of Personality and Social Psychology, 74*, 672-685.
- Rodkin, P. C., Farmer, T. W., Pearl, R., & Van Acker, R. (2000). Heterogeneity of popular boys: Antisocial and prosocial configurations. *Developmental Psychology, 36*, 14-24.
- Sakalaki, M., Richardson, C., & Thépaut, Y. (2007). Machiavellianism and economic opportunism. *Journal of Applied Social Psychology, 37*, 1181-1190.
- Sedikides, C., Rudich, E. A., Gregg, A. P., Kumashiro, M., & Rusbult, C. (2004). Are normal narcissists psychologically healthy? Self-esteem matters. *Journal of Personality and Social Psychology, 87*, 400-416.
- Steinberg, L., & Silverberg, S. B. (1986). The vicissitudes of autonomy in early adolescence. *Child Development, 57*, 841-851.
- Stucke, T. S. (2003). Who's to blame? Narcissism and self-serving attributions following feedback. *European Journal of Personality, 17*, 465-478.
- Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York, NY: Norton.

- Thomaes, S., Bushman, B. J., Stegge, H., & Olthof, T. (2008). Trumping shame by blasts of noise: Narcissism, self-esteem, shame, and aggression in young adolescents. *Child Development, 79*, 1792-1801.
- Twenge, J. M., & Campbell, K. W. (2003). "Isn't it fun to get the respect that we're going to deserve?" Narcissism, social rejection, and aggression. *Personality and Social Psychology Bulletin, 29*, 261-272.
- Wallace, H. M., & Baumeister, R. F. (2002). The performance of narcissists rises and falls with perceived opportunity for glory. *Journal of Personality and Social Psychology, 82*, 819-834.
- Washburn, J. J., McMahon, S. D., King, C. A., Reinecke, M. A., & Silver, C. (2004). Narcissistic features in young adolescents: Relations to aggression and internalizing symptoms. *Journal of Youth and Adolescence, 33*, 247-260.
- Warner, R., Kenny, D. A., & Soto, R. (1979) A new round-robin analysis of variance for social interaction data. *Journal of Personality and Social Psychology, 37*, 1742-1757.
- Werner, N. E., & Crick, N. R. (1999). Relational aggression and social-psychological adjustment in a college sample. *Journal of Abnormal Psychology, 108*, 615-623.
- Wheeler, J. A., Gorey, K. M., & Greenblatt, B. (1998). The beneficial effects of volunteering for older volunteers and the people they serve: A meta-analysis. *International Journal of Aging and Human Development, 47*, 69-79.
- Zimmer-Gembeck, M. J., Hunter, T. A., & Pronk, R. (2007). A model of behaviors, peer relations and depression: Perceived social acceptance as a mediator and the

divergence of perceptions. *Journal of Social and Clinical Psychology*, 26, 273-302.